

**Amendments to the Claims:**

Please replace all prior versions, and listing, of claims in the application with the following list of claims:

1-484. (Cancelled)

485. (Currently amended) A method for specifically immobilizing metallic colloid particles comprising: allowing a first metallic colloid particle to become immobilized with respect to a second metallic colloid particle by binding interaction between a first chemical or biological species fastened to the first colloid particle and a second chemical or biological species fastened to the second colloid particle; and determining the immobilization of the first colloid particle with respect to the second colloid particle, wherein at least one of the first or second colloid particle is coated with a self-assembled monolayer (SAM), wherein at least one of the first chemical or biological species or second chemical or biological species is fastened to the first or second colloid particle, respectively, via at least one of a carboxylate group, EDC/NHS chemistry, a nucleic acid sequence, or affinity tag interaction.

486. (Canceled)

487. (Previously presented) The method as in claim 485, wherein at least one of the first chemical or biological species or second chemical or biological species is fastened to the first or second colloid particle, respectively, via affinity tag interaction.

488. (Previously presented) The method as in claim 485, wherein at least one of the first chemical or biological species or second chemical or biological species is fastened to the first or second colloid particle, respectively, via affinity tag interaction comprising a metal binding tag.

489. (Previously presented) The method as in claim 485, wherein the binding interaction is a biological binding interaction.

490. (Previously presented) The method as in claim 489, wherein the biological binding interaction comprises binding between a protein and a nucleic acid.

491. (Previously presented) The method as in claim 485, wherein at least one of the first and second species is a protein.

492. (Previously presented) The method as in claim 485, wherein at least one of the first and second species is a synthetic molecule.

493. (Previously presented) The method as in claim 485, wherein each of the first colloid particle and the second colloid particle is a gold colloid particle.

494. (Previously presented) The method as in claim 485, wherein the first colloid particle carries an immobilized emissive or absorptive species.

495. (Previously presented) The method as in claim 494, wherein the second colloid particle carries an affecting species having the ability to affect emission or absorption of the immobilized emissive or absorptive species.

496. (Previously presented) The method as in claim 485, wherein the binding interaction comprises binding of the first and second species to a common entity, the allowing step comprising allowing the first and second species to bind to the common entity.

497. (Previously presented) The method as in claim 496, wherein the common entity comprises a colloid particle.

498. (Previously presented) The method as in claim 496, wherein the common entity comprises biological material.

499. (Previously presented) The method as in claim 485, comprising allowing the binding interaction to take place in the presence of a candidate drug.

500. (Previously presented) The method as in claim 485, further comprising exposing a sample suspected of containing an analyte to the first and second chemical or biological species, wherein the analyte is suspected of affecting the binding interaction.

501. (Previously presented) The method as in claim 500, wherein the analyte comprises a candidate drug.

502. (Previously presented) The method as in claim 485, wherein the allowing step comprises allowing an enzyme to affect the binding interaction between the first and second species, and the determining step comprises determining the effect of the enzyme on the binding interaction.

503. (Cancelled)

504. (Previously presented) The method as in claim 485, further comprising exposing, to the first and second chemical or biological species, a sample that contains or is suspected of containing an aggregate-forming species; or contains or is suspected of containing a precursor of an aggregate-forming species; or is able to produce or suspected of being able to produce aggregate-forming species; or is able to produce or suspected of being able to produce a precursor of an aggregate-forming species.

505. (New) The method according to claim 485, wherein a signaling entity is bound to at least one of the first and second colloid particle or first and second biological or chemical species.

506. (New) A method for immobilizing colloid particles comprising: allowing a first colloid particle to become immobilized with respect to a second colloid particle by binding interaction between a first chemical or biological species fastened to the first colloid particle and a second chemical or biological species fastened to the second colloid particle; and determining the

immobilization of the first colloid particle with respect to the second colloid particle, wherein at least one of the first or second colloid particle is coated with a self-assembled monolayer (SAM), wherein at least one of the first chemical or biological species or second chemical or biological species is fastened to the first or second colloid particle, respectively, via at least one of a carboxylate group, EDC/NHS chemistry, a nucleic acid sequence, or affinity tag interaction, wherein a signaling entity is bound to at least one of the first and second colloid particle or first and second biological or chemical species.

507. (New) A method for detecting specific interactions between metallic colloid particles comprising: allowing a first metallic colloid particle to become immobilized with respect to a second metallic colloid particle by binding interaction between a first chemical or biological species fastened to the first colloid particle and a second chemical or biological species fastened to the second colloid particle; and determining the immobilization of the first colloid particle with respect to the second colloid particle, wherein at least one of the first or second colloid particle is coated with a self-assembled monolayer (SAM), wherein at least one of the first chemical or biological species or second chemical or biological species is fastened to the first or second colloid particle, respectively, via at least one of a carboxylate group, EDC/NHS chemistry, a nucleic acid sequence, or affinity tag interaction, and wherein the single interaction between the metallic colloid particles is detected.